

Annual Meeting on
**NATUROPATHIC PHYSICIANS &
ACUPUNCTURISTS**

July 24-26, 2017 Melbourne, Australia

Effect of chronic exposure to diazinon on glucose homeostasis and oxidative stress in pancreas of rats and the potential role of Mesna in ameliorating this effect

Azza El-Medany

Alexandria University, Egypt

Residential and agricultural pesticide use is widespread in the world. Their extensive and indiscriminate use, in addition with their ability to interact with biological systems other than their primary targets constitute a health hazards to both humans and animals. The goal of this work was to study the effects of chronic exposure to diazinon and evaluate the ameliorating effect of mesna as antioxidant. 40 adult male rats were classified-control, diazinon and treated groups. Blood samples were taken and pancreas was removed for histopathological, ultra-structural and biochemical studies. A significant increase in the levels of malondialdehyde, tumor necrosis factor- α , myeloperoxidase activity, interleukin-1 β and serum glucose in the toxicated group with diazinon were observed while there was significant reduction in GSH and in serum insulin levels. After treatment with mesna a significant reduction was observed in the previously mentioned parameters and a significant rise in GSH and in insulin levels. Histopathological and ultra-structural studies showed destruction in pancreatic tissues and the β cells were the most affected cells among the injured islets. The current study try to spot light about the effects of chronic exposure to pesticides on vital organs as pancreas also has the role of oxidative stress that may be induced by them in evoking their toxicity. This study shows the role of antioxidant drugs in ameliorating or preventing the toxicity. This appears to be a promising approach that may be considered as a complementary treatment of pesticide toxicity.

Biography

Azza El Medany has completed her PhD and Postdoctoral studies from Alexandria University College of Medicine. She is a Professor of Pharmacology and Vice Head of Department of Pharmacology, College of Medicine, KSU. She has published more than 40 papers in the areas of GIT, CVS, natural products and toxicological researches in reputed journals and serving as a member of a number of professional bodies.

dr_azzaelmedany@yahoo.com

Notes: